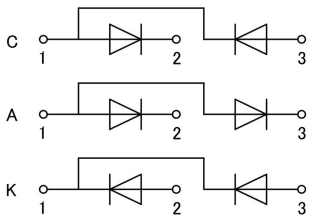
MD400C(A/K)-D6

Rectifier Diode Module

V_{RRM} 3000 to 3600V
I_{FAV} 400A

Circuit



Applications

- Non-controllable rectifiers for AC/AC converters
- Line rectifiers for transistorized AC motor controllers
- Field supply for DC motors

Features

- International standard package
- High Surge Capability
- Simple Mounting

Blocking Characteristics

TYPE			V_{RRM}	V_{RSM}	Units
MD400C30D6	MD400A30D6	MD400K30D6	3000V	3100V	V
MD400C32D6	MD400A32D6	MD400K32D6	3200V	3300V	V
MD400C34D6	MD400A34D6	MD400K34D6	3400V	3560V	V
MD400C36D6	MD400A36D6	MD400K36D6	3600V	3700V	V

Maximum Ratings

Symbol	Conditions	Values	Units
I_{FAV}	Single phase ,half wave 180° conduction Tc=100℃	400	A
I_{FSM}	t=10ms T_{vj}=T_{vjM}	13000	A
i^2t	t=10ms T_{vj}=T_{vjM}	845000	A^2s
V_{isol}	a.c.50HZ;r.m.s.;1min,I_{iso} :2mA(max)	4000	V
T_{vj}		-40 to 150	℃
T_{stg}		-40 to 125	℃
Mt	To terminals(M10)	12±15%	Nm
Ms	To heatsink(M6)	6±15%	Nm
Weight	Module (Approximately)	1550	g

Thermal Characteristics

Symbol	Conditions	Values	Units
$R_{th(j-c)}$	per diode	0.073	℃/W
$R_{th(c-s)}$	per diode	0.020	℃/W

Electrical Characteristics

Symbol	Conditions	Values			Units
		Min.	Typ.	Max.	
V_{FM}	T=25℃ I_F =1200A			1.6	V
I_{RRM}	T_{vj}=T_{vjM} V=V_{RRM}			30	mA
V_{FO}	T_{vj}=T_{vjM}			0.97	V
r_F	T_{vj}=T_{vjM}			0.72	mΩ

Performance Curves

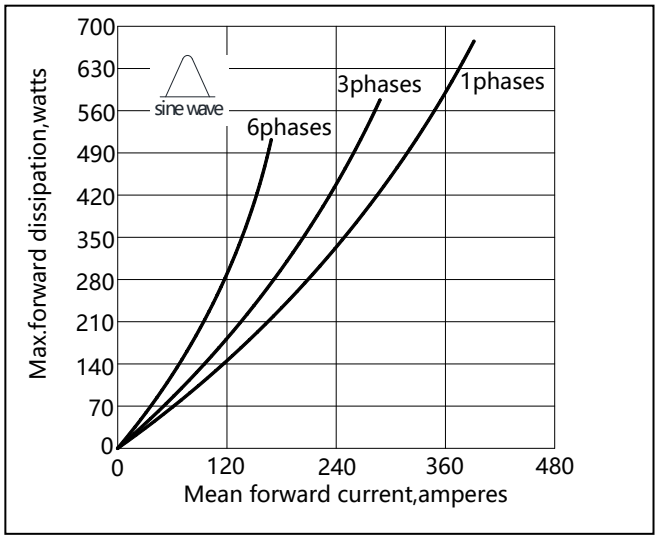


Fig1. Power dissipation

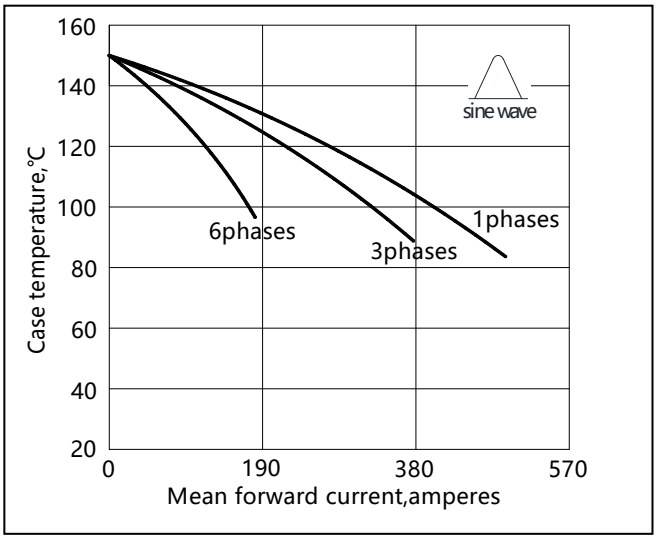


Fig2.Forward Current Derating Curve

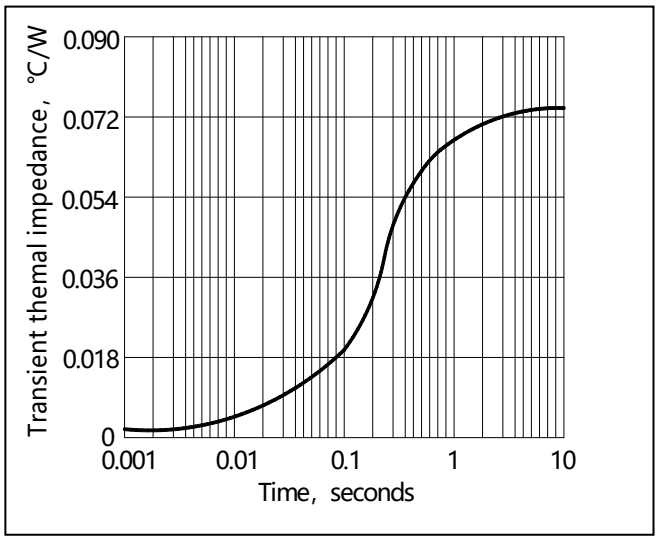


Fig3. Transient thermal impedance

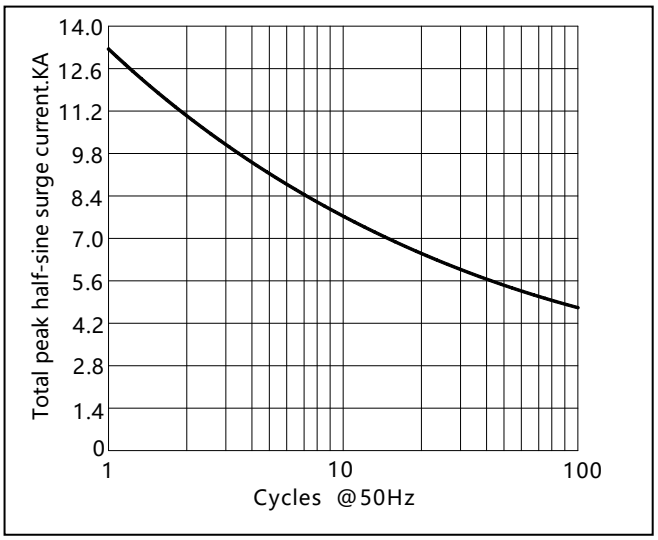


Fig4. Max Non-Repetitive Forward Surge Current

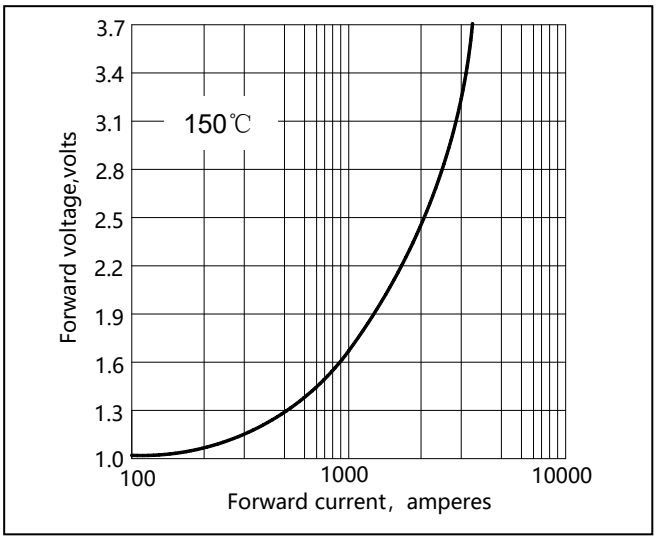
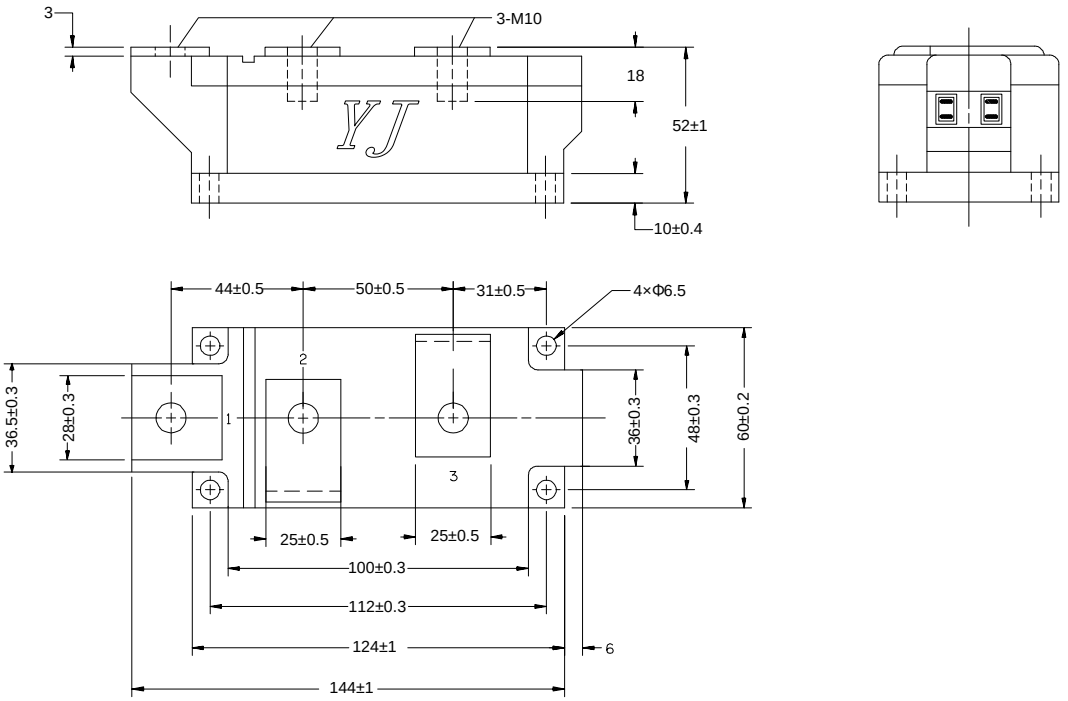


Fig5. Forward Characteristics

Package Outline Information

CASE: D6



Dimensions in mm
Unmarked dimensional tolerance：±0.5mm